

General Overall Parameter Comparison of the 1994 Permit to 2007 Draft Permit

Parameter	1994 Permit includes 1997, 1999 modifications		2007 Draft permit		% Change
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	
Total Suspended Solids	7,806 lbs/day	18,669 lbs/day	7,238 lbs/day	17,383 lbs/day	-6.90
Oil and Grease	2,802 lbs/day	8,008 lbs/day	2,802 lbs/day	7,967.4 lbs/day	-0.50
Selenium (1)	Monitor/Report	45 ug/l (3)	4.1 ug/l	8.2 ug/l	-82.00
Benzene	65 ug/l	150ug/l	Monitor/Report (2)	Monitor/Report (2)	
Benzo(a)pyrene (1)	Monitor/Report	1 ug/l (3)	.091 ug/l	.22 ug/L	-78.00
Naphthalene	NA	4.45 lbs/day	NA	1.95 lbs/day	-56.00
Phenols (4AAP)	33.63 lbs/day	56.24 lbs/day	27.4 lbs/day	41.75 lbs/day	-25.80
Ammonia	325 lbs/day (4)	1,055 lbs/day (4)	239.4 lbs/day(4)	767 lbs/day (4)	-27.30
Summer	330 lbs/day	770 lbs/day	330 lbs/day	770 lbs/day	
Winter	550 lbs/day	1300 lbs/day	550 lbs/day	1,300 lbs/day	
Cyanide, Total	47.78 lbs/day	88.38 lbs/day	49.28 lbs/day (7)	91.78 lbs/day (7)	3.80
Cyanide, Free (10)	7.6 ug/l	18 ug/l	seasonal	seasonal	
Season 1			7.6 ug/l (5)	18 ug/l (5)	
Season 2			6.0 ug/l (5)	13.0 ug/l (5)	-28.00
Mercury	No limit	No limit	1.3 ng/l (6)	3.1 ng/l (6)	
Total Residual Chlorine	10 ug/l	20 ug/l	8 ug/l	18 ug/l	-10.00
Fluoride (1)	Monitor/Report	2,700 ug/l	Monitor/Report (8)	Monitor/Report (8)	
Chloride	Monitor/Report	Monitor/Report	Monitor/Report	Monitor/Report	
Sulfate	Monitor/Report	Monitor/Report	Monitor/Report	Monitor/Report	
Whole Effluent Toxicity	Monitor/Report	NA	1.0 TU chronic (9)	NA	
Temperature (11)	2 locations	2 locations	3 locations	3 locations (12)	
Lead	19.3 lbs/day	50.66 lbs/day	8.86 lbs/day	20.58 lbs/day	-59.00
Zinc	81.84 lbs/day	185.74 lbs/day	68.28 lbs/day	157.28 lbs/day	-15.30
Copper	No limit	No limit	59.7 lbs/day	95.9 lbs/day	
CBOD5					
Spring	1,334 lbs/day	2,669 lbs/day	1,334 lbs/day	2,669 lbs/day	
Winter	4,537 lbs/day	9,074 lbs/day	4,537 lbs/day	9,074 lbs/day	
Total Rec. Chromium	29.77 lbs/day	50.31 lbs/day	48.5 lbs/day (13)	78.5 lbs/day (13)	56.00
Tetrachloroethylene	NA	3.03 lbs/day	NA	2.5 lbs/day	-17.50
Silver (7)	No limit	No limit	6.8 lbs/day	12.2 lbs/day	
Nickel (7)	No limit	No limit	67.5 lbs/day	112.9 lbs/day	
Cadmium (7)	No limit	No limit	7.4 lbs/day	19.6 lbs/day	
Hex. Chromium (7)	No limit	No limit	.16 lbs/day	.46 lbs/day	
Total Toxic Organics (7)	NA	No limit	NA	60.4 lbs/day	
			Average Change		-24.75

(1) Due to appeal of previous permit limit the application of the limit was stayed

(2) Limits were placed in the 1997 modification based upon limited data indicating a reasonable potential to exceed water quality standards.

An extensive amount of data now indicates benzene levels do not have a potential to exceed federal or state standards. Required reporting will monitor levels.

(3) Because of a previous agreed order USS is operating under the interim limit until current permit is issued.

(4) For outfalls that do not have seasonal limits.

(5) Permit limits seasonal. Limits are concentration based, the mass calculations are dependent upon flow and concentration.

(6) The current (1994) permit does not have limits for Mercury.

(7) Federal guidelines for metal finishing activity includes limits for parameters not in previous permit. Limits in draft permit meet fishable-swimmable water quality standards.

(8) More biological data shows no reasonable potential to exceed federal water quality standard

(9) WET limits are on a monthly average basis. Monitoring and limits aimed primarily at preventing the potential for chronic impacts over time. Limit at 2 outfalls.

(10) Federal regulations only address total cyanide and do not specifically address free cyanide. 2007 draft permit addresses both free cyanide and total cyanide, which is more protective. Cyanide solutions no longer allowed in metal finishing activities.

(11) Monitoring increased from periodic to continuous; locations increased from two (2) to three (3) locations closer to US Steel outfalls.

(12) Temperature monitoring is increased from periodic to continuous monitoring

(13) Established limit more protective than water quality guidelines; limits vary with production changes. Measurement moved from external to internal outfall, closer to site most likely to discharge to that parameter. Limits in draft permit meet fishable-swimmable water quality standards.

NA= scientific reporting does not conform with monthly average or daily maximum reporting

No Limit = no monitoring or discharge limits established

The antidegradation requirements are met in this draft permit and IDEM will work with the US EPA to provide assurance.

final